

The Development Strategies of Dairy Cows in Eastern Division

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DESCRIPTION

Appropriate phenotypes are necessary for assessing and increasing wellbeing, which is an important problem in the dairy industry. Stress is a significant factor among the many dimensions of animal wellbeing. Hans Selye led the first studies on stress in 1936 using the general adaptation syndrome theory. When it was initially characterized, the symptoms were said to be usual and to be a frequent reaction to damage, regardless of the type of injury that had occurred. Selye went on to define stress as "the unspecific reaction of the body's tissues to any need made upon it," which is still a widely recognized definition. He further explained that anxiety was a combination between general destruction and security in which everything that puts at risk life leads to stress and adaptive responses. As a result, stress cannot be completely avoided in life. When adjustment is not possible, stress can have negative effects or be viewed as a positive or negative condition. In either case, stress lowers welfare. This general idea is viewed differently depending on the discipline. For example, in the behavioral sciences, stress is defined as the perception of threat, which causes anxiety, apprehension psychological strain, and difficulty adjusting. In pure neuron endocrinology, on the other hand, stress is defined as any stimulus that triggers the release of adrenal glucocorticoids and Adrenocorticotropic Hormone (ACTH). Three stages have been used to categorize stress since the original idea in 1936 alert, resistance, and exhaustion. The first step is when the body exhibits changes brought on by the stressor's initial exposure, giving it the ability to fight or run. When stress persists without allowing for adaptation, resistance grows and the alarm qualities vanish. Eventually, persistent exposure may lead to fatigue and even death. Stress is classified as acute or transient if it is limited to the warning step. Acute stress is the result of a transient

circumstance, whether it be psychological, emotional, or physical, that typically permits a full and speedy response to restore physiological equilibrium. In these circumstances, stress is frequently well tolerated even if it may cause significant physiological changes. The immediate biological reactions to acute challenges in farm animals include things like gestation, circumcising, weaning, integrating animals with individuals from various social categories, moderation, conveyance, being killed, heat, and humidity. These reactions typically follow a similar pattern, with the Hypothalamic Pituitary Adrenocortical (HPA) axis being activated and blood cortisol levels rising. When stress is chronic that is, repetitive or ongoing over an extended period of time and there is no way for the creature in question to adjust or gain control, resistance and tiredness result. Chronic stress makes it rare for the sympathetic nervous system to trigger the relaxation reacting, and excessive exposure to stress chemicals wears down the adaptation system, changing biological processes and having unfavorable side consequences. However, a number of issues pertaining to animal welfare have the potential to persist, transforming acute stress into chronic stress. The majority of physiological study on the welfare of dairy cows has, surprisingly, concentrated on acute stress, with less emphasis paid to prolonged stress, which has a more noticeable impact on welfare and productivity. Indeed, cows' immunological, metabolic, endocrine, and psychological states are impacted by prolonged stress. An increased vulnerability to viral, inflammatory, and metabolic illnesses results from this. In addition, infertility issues, thymus shrinkage, growth abnormalities, weight loss, and decreased milk production are linked to chronic stress. As a result, it negatively affects farm economics and productivity, but most importantly, it negatively affects cow welfare and how the public views dairy farming.

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